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10/823,704

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Chang-woong Yoo

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EXAMINER

SURYAWANSHI, SURESH

ART UNIT

PAPER NUMBER

2115

DATE MAILED: 08/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/823,704

**Applicant(s)**

YOO, CHANG-WOONG

**Examiner**

Suresh K. Suryawanshi

**Art Unit**

2115

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/14/04</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Claims 1-18 are presented for examination.

#### ***Claim Objections***

2. Claims 1-14 are objected to because of the following informalities: use of abbreviation "EDID" without an establish definition in the claims itself. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen (US Patent 6,839,055) in view of Nolan et al (US Patent 6,049,319; hereinafter Nolan).
5. As per claim 1, Nguyen discloses a control method of a computer system including a main body and a monitor displaying a video signal from the main body, the control method of the computer system comprising:

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determining whether the display information of the input video signal transmitted from the main body to the monitor is suitable for the EDID of the monitor [Fig. 1; col. 2, line 64 -- col. 3, line 27; col. 3, line 56 -- col. 4, line 15; col. 4, lines 34-56; error detector 127 determines whether the display information of the input video signal transmitted from the main body via video controller 103 to the monitor via display system 105 is suitable for the EDID of the monitor];

displaying the input video signal if determined that the display information of the input video signal is suitable for the EDID and supplying an error signal to the main body if determined that the display information of the input video signal is not suitable for the EDID [Fig. 1; col. 2, lines 52-54; Fig. 1; col. 2, line 64 -- col. 3, line 27; col. 3, lines 45-46; col. 3, line 56 -- col. 4, line 15; col. 4, lines 34-56; displaying the images as per the video data received from video controller if there is no error detected by the error detector; if the error detector 127 detects an error, an error indication is sent to video controller circuitry 109].

Nguyen does not expressly disclose storing a display information of the video signal displayed on the monitor, wherein the display information is based on EDID supplied from the monitor. However, Nolan clearly discloses that software in a portable PC reads the configuration information in the EDID and calculates the minimum and maximum refresh rates and writes to an active register of the computer [col. 3, lines 35-55; col. 6, lines 13-32].

Similarly, Nguyen does not expressly disclose about processing the input video signal according to the display information stored in the main body and supplying the processed video signal to the monitor if the error signal is supplied to the computer main body. However, Nolan clearly discloses that in case of a newer monitor capable of supporting plug-and-play, the system processes the input video signal according to the display information stored in the main body and supplies the processed video signal (i.e., calculating minimum and maximum vertical refresh rates) according to the EDID information received from the monitor [col. 3, lines 35-55; col. 6, lines 13-60; col. 8, lines 28-42].

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the cited references as both are directed to the problem of auto configuration of a plugged in display monitor to a computer system. Moreover, Nguyen disclosed invention would clearly be benefited by Nolan disclosed invention because not only one can communicate the error signal to the video controller but also can quickly process an input video signal according to the display information stored in the computer.

6. As per claim 4, Nguyen discloses a control method of a computer system including a computer main body and a monitor displaying a video signal from the computer main body, the control method of the computer system comprising:

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determining whether a display information of the input video signal transmitted from the computer main body to the monitor is suitable for EDID of the monitor [Fig. 1; col. 2, line 64 -- col. 3, line 27; col. 3, line 56 -- col. 4, line 15; col. 4, lines 34-56; error detector 127 determines whether the display information of the input video signal transmitted from the main body via video controller 103 to the monitor via display system 105 is suitable for the EDID of the monitor];

displaying the input video signal on the monitor if the display information of the video signal is suitable for the EDID and supplying an error signal to the computer main body if the display information of the input video signal is not suitable for the EDID [Fig. 1; col. 2, lines 52-54; Fig. 1; col. 2, line 64 -- col. 3, line 27; col. 3, lines 45-46; col. 3, line 56 -- col. 4, line 15; col. 4, lines 34-56; displaying the images as per the video data received from video controller if there is no error detected by the error detector; if the error detector 127 detects an error, an error indication is sent to video controller circuitry 109].

Nguyen does not disclose about calculating a display information set-up value. However, Nolan clearly discloses that software in a portable PC reads the configuration information in the EDID and calculates the minimum and maximum refresh rates and writes to an active register of the computer [col. 3, lines 35-55; col. 6, lines 13-32].

Similarly, Nguyen does not expressly disclose about processing the input video signal according to the set-up value and supplying the processed video signal to the monitor. However,

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Nolan clearly discloses that in case of a newer monitor capable of supporting plug-and-play, the system processes the input video signal according to the display information stored in the main body and supplies the processed video signal (i.e., calculating minimum and maximum vertical refresh rates) according to the EDID information received from the monitor [col. 3, lines 35-55; col. 6, lines 13-60; col. 8, lines 28-42].

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the cited references as both are directed to the problem of auto configuration of a plugged in display monitor to a computer system. Moreover, Nguyen disclosed invention would clearly be benefited by Nolan disclosed invention because not only one can communicate the error signal to the video controller but also can quickly process an input video signal according to the display information stored in the computer.

7. As per claim 7, Nguyen discloses a computer system including a computer main body and a monitor displaying a video signal from the computer main body, the computer system comprising:

an EDID storing part provided in the monitor to store EDID of the monitor [Fig. 1; EDID EPROM 131];

a display control part determining whether the display information of the input video signal transmitted from the computer main body to the monitor is suitable for the EDID of the monitor, displaying the input video signal if the display information of the input video signal is suitable for EDID and supplying an error signal to the computer main body if the display information of the input signal is not suitable for the EDID [Fig. 1; col. 2, line 64 -- col. 3, line 27; col. 3, line 56 -- col. 4, line 15; col. 4, lines 34-56; error detector 127 determines whether the display information of the input video signal transmitted from the main body via video controller 103 to the monitor via display system 105 is suitable for the EDID of the monitor; if the error detector 127 detects an error, an error indication is sent to video controller circuitry 109].

Nguyen does not disclose about a display information storing part provided in the computer main body. However, Nolan clearly discloses that software in a portable PC reads the configuration information in the EDID and calculates the minimum and maximum refresh rates and writes to an active register of the computer [col. 3, lines 35-55; col. 6, lines 13-32].

Similarly, Nguyen does not disclose that the stored display information being based on the EDID. However, Nolan clearly discloses that the stored display information is based on the EDID supplied from the monitor [col. 3, lines 35-55; col. 6, lines 13-60; col. 8, lines 28-42].

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the cited references as both are directed to the problem of auto configuration of a plugged in display monitor to a computer system. Moreover, Nguyen



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disclosed invention would clearly be benefited by Nolan disclosed invention because not only one can communicate the error signal to the video controller but also can quickly process an input video signal according to the display information stored in the computer.

8. As per claim 11, Nguyen discloses a computer system comprising a computer main body and a monitor displaying a video signal from the computer main body, the computer system comprising:

an EDID storing part provided in the monitor to store EDID of the monitor [Fig. 1; EDID EPROM 131];

a display control part determining whether a display information of the input video signal transmitted from the computer main body to the monitor is suitable for the EDID of the monitor, displaying the input video signal if the display information of the input video signal is suitable for the EDID, and supplying an error signal to the computer main body, if the display information of the input video signal is not suitable for the EDID [Fig. 1; col. 2, line 64 -- col. 3, line 27; col. 3, line 56 -- col. 4, line 15; col. 4, lines 34-56; error detector 127 determines whether the display information of the input video signal transmitted from the main body via video controller 103 to the monitor via display system 105 is suitable for the EDID of the monitor; if the error detector 127 detects an error, an error indication is sent to video controller circuitry 109]; and

Nguyen does not disclose about calculating a display set-up value. However, Nolan clearly discloses that software in a portable PC reads the configuration information in the EDID and calculates the minimum and maximum refresh rates and writes to an active register of the computer [col. 3, lines 35-55; col. 6, lines 13-32].

Similarly, Nguyen does not expressly disclose about processing the input video signal according to the set-up value and supplying the processed video signal to the monitor. However, Nolan clearly discloses that in case of a newer monitor capable of supporting plug-and-play, the system processes the input video signal according to the display information stored in the main body and supplies the processed video signal (i.e., calculating minimum and maximum vertical refresh rates) according to the EDID information received from the monitor [col. 3, lines 35-55; col. 6, lines 13-60; col. 8, lines 28-42].

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the cited references as both are directed to the problem of auto configuration of a plugged in display monitor to a computer system. Moreover, Nguyen disclosed invention would clearly be benefited by Nolan disclosed invention because not only one can communicate the error signal to the video controller but also can quickly process an input video signal according to the display information stored in the computer.

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9. As per claim 15, Nguyen discloses a method of controlling the display settings of a monitor of a computer system, comprising:

receiving a display setting request to change the current display setting of the monitor to a new display setting [Fig. 1; col. 2, line 64 -- col. 3, line 27; col. 3, line 56 -- col. 4, line 15; col. 4, lines 34-56; video controller 103 sends a request/test signal to change the current display setting of the monitor to a new display setting]; and

determining if the new display setting is compatible with the normal Extended Display Identification Data (EDID) of the monitor, wherein: if the new display setting is compatible with the normal EDID, then adjusting the monitor to display video signals at the new display setting, and if the new display setting is not compatible with the normal EDID, then displaying an error message on the monitor and sending an error signal to the computer system from the monitor and resetting the display setting to the stored current display setting [Fig. 1; col. 2, line 64 -- col. 3, line 27; col. 3, line 56 -- col. 4, line 15; col. 4, lines 34-56; error detector 127 determines whether the display information of the input video signal transmitted from the main body via video controller 103 to the monitor via display system 105 is suitable for the EDID of the monitor; if the error detector 127 detects an error, an error indication is sent to video controller circuitry 109].

Nguyen does not disclose about storing a current setting of the monitor. However, Nolan clearly discloses that software in a portable PC reads the configuration information in the EDID

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and calculates the minimum and maximum refresh rates and writes to an active register of the computer [col. 3, lines 35-55; col. 6, lines 13-32].

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the cited references as both are directed to the problem of auto configuration of a plugged in display monitor to a computer system. Moreover, Nguyen disclosed invention would clearly be benefited by Nolan disclosed invention because not only one can communicate the error signal to the video controller but also can quickly process an input video signal according to the display information stored in the computer.

10. As per claim 2, Nguyen discloses that a part of the error signal is the same as EDID data [col. 5, lines 43-45].

11. As per claim 3, Nguyen discloses supplying the EDID to the main body if determined that the display information of the input video signal is suitable for the EDID [col. 3, line 58 -- col. 4, line 7].

12. As per claim 5, Nguyen discloses that a part of the error signal is the same as the EDID data [col. 5, lines 43-45].

13. As per claim 6, Nguyen discloses supplying the EDID to the computer main body, if the input video signal is suitable for the EDID [col. 3, line 58 -- col. 4, line 7].

14. As per claim 8, Nguyen discloses that a part of the error signal is the same as a part of the EDID [col. 5, lines 43-45].

15. As per claim 9, Nguyen discloses that the display control part supplies the EDID to the computer main body, if the input video signal is suitable for the EDID [col. 3, line 58 -- col. 4, line 7].

16. As per claim 10, Nguyen discloses that the EDID storing part is updated with an error EDID when the transmitted display information of the input video signal is not suitable for the EDID [col. 5, lines 23-24, 43-45].

17. As per claim 12, Nguyen discloses that a part of the error signal is the same as a part of the EDID data [col. 5, lines 43-45].

18. As per claim 13, Nguyen discloses that the display control part supplies the EDID to the computer main body, if the input video signal is suitable for the EDID [col. 3, line 58 -- col. 4, line 7].

19. As per claim 14, Nguyen discloses that the error signal updates the EDID in the EDID storing part to result in an error EDID when the transmitted display information of the input video signal is not suitable for the EDID [col. 5, lines 23-24, 43-45].

20. As per claim 16, Nguyen discloses updating the current display setting to the new display setting if the new display setting is compatible with the normal EDID [col. 3, line 58 -- col. 4, line 7].

21. As per claim 17, Nguyen discloses generating a changed EDID corresponding to a portion of the normal EDID and a portion of the error signal, wherein the computer system is provided with the changed EDID when receiving the display setting request after the error signal occurs [col. 5, lines 15-24, 43-45].

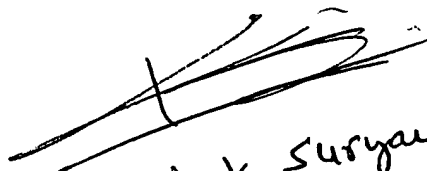
22. As per claim 18, Nolan discloses calculating a revised display information when the new display setting is not compatible with the normal EDID; and storing the revised display information, wherein the current display setting is updated [col. 3, lines 35-55; col. 6, lines 13-60].

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suresh K. Suryawanshi whose telephone number is 571-272-3668. The examiner can normally be reached on 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas C. Lee can be reached on 571-272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Suresh K. Suryawanshi